Name:_____ Date:_____

A2CC: Review Sheet for Quarter 1 Exam 2

Please show all work on a separate piece of paper. This review sheet is NOT comprehensive. It is merely a sampling of questions from topics that we have covered. Please go over all notes and homework assignments to fully prepare.

Exam 2 : Monday, October 16th

1. Solve for x: $32^x = 8$

2. Subtract $(-4-2i)$ from $(6+9i)$, and express answer in $a+bi$ form.

3. Find the product of $(-3+6i)$ and $(3+5i)$.

4. Solve for y: $4y^{\frac{2}{3}} - 5 = 20$

5. Express in simplest radical form in terms of i: $2\sqrt{-196} - 3\sqrt{-225}$

6. Write as a power of i in simplest terms: i^{2001}

7. Solve for x: $\left(\frac{1}{3}\right)^{1-x} = 9$

8. Write $a^{-\frac{2}{5}}$ using radicals.

For questions 9-17 express each in simplest radical form

9. $\sqrt{90}+\sqrt{40}$
10. $\sqrt{98}-2\sqrt{18}$
11. $2\sqrt{5}\cdot\sqrt{15}$
12. $\dfrac{6\sqrt{60}}{24\sqrt{3}}$
13. $\sqrt{3}(2\sqrt{27}-\sqrt{6})$
14. $(2+\sqrt{5})(3-\sqrt{5})$
15. $\dfrac{3}{5}\sqrt{75a^4b^6c}-\dfrac{1}{2}\sqrt{192a^4b^6c}$
16. $18\sqrt[3]{32y^7}+6\sqrt[3]{4y}$
17. $3\sqrt{4a^3}-6\sqrt{9a^3}$

For 18 -20, simplify the expression and eliminate any negative exponent(s).

18. $(12x^4y^2)^2\left(\dfrac{x^5y}{2}\right)$
19. $(rs)^3(2s)^{-2}(4r)^4$
20. $\dfrac{a^{-3}b^4}{a^{-5}b^5}$

For 21 and 22, evaluate each expression.

21. $(-32)^{\frac{2}{5}}$
22. $\left(\dfrac{25}{64}\right)^{-\frac{3}{2}}$
23. Simplify: $\sqrt[3]{81x^8y^4}$

24. Simplify: $\dfrac{\sqrt{2a^3b}}{\sqrt{6a}}$

25. Simplify: $2\sqrt{8x^3}+3x\sqrt{32x}-x\sqrt{18x}$

26. What is $4x^{\frac{1}{2}}$ written in radical form?

27. Express with rational exponents: $\sqrt[4]{3x}$

28. Simplify: $\dfrac{8\sqrt{20x^8}-4\sqrt{10x^3}}{2\sqrt{5x}}$

29. Solve: $(w+1)^{3/2}=64$

30. Solve for x: $2x^{2/5}=32$

31. Solve for y: $3y^{1/3}-2=4$

32. Solve: $16^{x-1}=8^{x}$

33. What is the value of *x* in the equation $81^{x+2}=27^{5x+4}$?

34. What is the solution set of $2^{x+1}=8$?

35. Solve: $\left(\dfrac{1}{27}\right)^{-x}=9^{x+2}$